

Course Syllabus

WELCOME TO THE PATHOLOGY COURSE

I apologize for the length of this introductory document. However, it includes the answers to most of the questions raised (often countless times) during previous years. When you have questions, please refer to this document. There's a good chance you will find the answer.

Given the COVID-19 pandemic, the information is subject to potential revision based on changing local conditions. You already know that, but I had to say it.

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CONTACT INFORMATION



Course Director: Erika Crouch, M.D., Ph.D.

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Course Coordinator

Our Course Coordinator is Ash Edwards (314-273-5476, edwards.a@wustl.edu). Although I am always available to you, it would be helpful if you could initially direct administrative questions to Ash, most reliably via email.

Section and Theme Leaders

Each 2nd year block contains one or more sections, each with its own Section Leader (albeit currently often yours truly). The Course also includes one theme with content that spans more than one block.

The Section or Theme Leaders are responsible for the organization and content of the individual sections or themes, respectively. If you have a question that specifically relates the content of a section, theme, or specific lecture; please consider first contacting the lecturer or corresponding section leader; a contact list is provided on the Reference page. Of course, I'm always available and will do my best to answer any questions.

BLOCK	SECTION	LEADER
Block 1	General Pathology	Dr. Erika Crouch
	Endocrine Pathology	Dr. Erika Crouch
Block 2	Pulmonary Pathology	Dr. Erika Crouch
	Cardiac Pathology	Dr. Erika Crouch
	Renal & Urinary Tract Pathology	Dr. Erika Crouch
	OB-GYN/Testicular Pathology	Dr. Ian Hagemann
Block 3	GI Pathology	Dr. Erika Crouch
	Dermatopathology	Dr. Ilana Rosman
	Bone & Soft Tissue Pathology	Dr. John Chrisinger
Block 6	Hematopathology	Dr. John Frater
BLOCKS	THEME	LEADER
B 1-3,5-6	Laboratory Medicine Theme	Dr. Suzanne Thibodeaux

COURSE PHILOSOPHY AND GOALS

Philosophy: Students enter Medical School with a wide variety of educational needs and learning styles. For this reason, we offer a variety of learning resources with the hope that we can better meet their academic needs. The combination of lectures, handout materials, online interactive experiences, optional texts, optional computing resources, and objective-based examinations should provide each student with a solid foundation in pathology in anticipation of their future clinical training and medical practice.

Overarching Goal: The goal of the Pathology Course is to provide students with essential medical knowledge and a broad understanding of human disease. The Course emphasizes "the language of disease" as a necessary foundation for self-education and lifelong learning.

COURSE OBJECTIVES

By the end of this course students should be able to:

- Define the keywords and phrases emphasized in the lectures, course materials, and glossary.
- Describe our current understanding of the pathogenesis and epidemiology of the common or important diseases discussed in lecture.
- Describe and recognize the major cell and tissue alterations associated with these diseases and how they contribute to organ dysfunction or clinical signs and symptoms.
- Describe how pathological analysis is used to recognize, classify, grade and stage the major types of malignancy.
- Describe how pathological analysis contributes to disease surveillance and the evaluation of therapeutic interventions.

Each course objective has been mapped to the WUSM Medical student competency-based learning objectives. These program level objectives can be found in the [Bulletin of the School of Medicine](#).

Specific learning (session) objectives have been developed for each session, and are included at the beginning of each lecture handout for each section of the Course. These session objectives build on the above course learning objectives and goals.

COURSE MATERIALS

All schedules, materials, important links and documents can be accessed via this Canvas site. Financial disclosure: Unless otherwise stated, faculty in the Department of Pathology and Immunology have no conflicts of interest relevant to the content of this Course.

Written Materials and PowerPoint Presentations

Handouts for each section are provided in a course book in PDF format and are available under Reference. The original Word files are linked from the Session Overview page for the corresponding lecture. The style of the handout / course book material is left to the discretion of the lecturer; however, essentially all have a narrative structure.

PowerPoint presentations are linked to the session overview page as soon as the final version becomes available. Links to any updated versions of a file are identified by the date and time of upload. Some instructors include additional slides or summary tables at the end of the presentation and some annotate slides in speaker's notes. A PDF version of the entire presentation is also available; the speaker's notes are preserved in these files as annotations.

Optional Texts and Companion Resources

Are there any required texts? There are NO required texts. However, the first eight chapters of the *Pathologic Basis of Disease* by Robbins, Cotran, and Kumar (10th edition, W.B. Saunders, 2021) are *highly recommended* as complementary reading for the General Pathology Section of the course. The first section of Chapter 6 on "General Features of the Immune System," provides an excellent review of immunologic mechanisms discussed in the first year. Although the text is quite detailed, it is very readable, up-to-date, and the color photographs are generally excellent. This is considered by many to be the "gold-standard" text.

Many students find *Robbins Basic Pathology* by Kumar, Robbins, and Cotran (10th edition, W.B. Saunders, 2018) to be preferable to *Pathologic Basis of Disease*. It extensively overlaps with "Pappa Robbins," but is more focused and more condensed. It was written specifically for Medical Students. Feedback from past students suggests that it is a good review for the Boards. The Ebook offered by Becker was selected as the primary text for the Gateway Curriculum. The *Pocket Companion to Robbins Pathologic Basis of Disease* provides a reasonable outline of many of the most important points in *Pathologic Basis of Disease*.

Both texts are available in electronic form via Clinical Key from Becker Library (see Pathology Links under Reference). Some chapters from *Robbins Basic Pathology* are linked from the session overview pages.

Can you recommend an atlas of gross or microscopic pathology? The Robbins and Cotran series of texts has an accompanying atlas entitled *Atlas of Pathology* by Klatt (third edition, W. B. Saunders, 2015). The images are more useful than found on most web sites because they have been carefully curated and accurately identified. If you want to see more images of gross and microscopic pathology, this is the way to go! The Robbins atlas can be accessed in an electronic form via Clinical Key from Becker Library as above.

Computer Assisted Resources

The Course *Glossaries* on Canvas were student generated, but subsequently vetted and are maintained by faculty. It is not comprehensive, but includes most of the keywords identified in the written materials. I highly recommend it, particularly for General Pathology. It also provides an easy way to quiz yourself regarding the definitions of key terminology.

Slide-Atlas virtual microscopy slides are provided for each section. All the slides for this course have narrative guides and annotations that identify key histologic landmarks and/or pathological abnormalities. Slides are grouped to align with the corresponding sessions and have descriptive file names. These are available under Reference, but are also linked from the corresponding section or theme on the home page.

PathDeck corresponds to a set of student-generated, faculty vetted Anki decks for each section of the Course. The decks are distributed via Box as usual. Because many cards contain copy protected information it is essential that they not be shared on the Anki web site or with students at other Medical Schools. Student caretakers for the collection have recently added content from *First Aid* to the notes field of various cards; this is not vetted but should be recognizable.

POLICIES

Grading and Exams

Grading

The primary goal of grading is to make sure that each student completing the Course knows the key terminology and core knowledge base of general and organ system pathology. Like all other first and second year courses, the Pathology Course is graded on Pass/Fail basis.

There will be a single Pass/Fail grade for the Course based on 4 Pass/Fail exams and satisfactory completion of all required assignments. The weighting of the exams is as follows: Block 1, 25%; Block 2, 30%; Block 3, 30%, and Block 6, 15%. You must correctly answer 70% or more of the questions to pass each exam, and students will not be permitted to remediate more than 2 of the 4 exams. A failure of more than 2 exams, a failure to remediate a failed exam, or a failure to complete a required assignment will result in a "FAIL" grade for the course. A failure in the course will be handled as dictated by the school policy pertaining to [Indications for Review of Academic Performance](#). An "INCOMPLETE" will be issued if any required remediation or assignment is pending but not completed by the time of required grade submission.

The cut-off for passing an exam is absolute, regardless of personal circumstances. Remediation is individualized and may consist of a makeup exam and/or a written study exercise. After satisfying the required remediation, the score is adjusted to the minimum passing score. All failing scores and all passing scores below 80% will be reported to Dr. Moscoso, Associate Dean of Student Affairs, for no other reason than to help insure that potentially struggling students receive the assistance that they need.

In addition, failure to complete required assignments by the scheduled due date is considered a professionalism concern. Students with more than two late submissions during the course will be identified on a late list that is shared with Dr. Moscoso at the end of the Course. In the past, I contacted students that were falling behind, but I just do not have the time. So, it is now fully your responsibility.

Exams

When will the exams be administered?

Block 1	September 7	TBD	Online
Block 2	November 5	TBD	Online
Block 3	December 17	TBD	Online
Block 6	May 1	TBD	Online

The exams will only test materials presented in the Pathology Course, not any content presented in Pathophysiology. Detailed instructions are linked from the home page in Canvas as an event on the scheduled date of the exam. They are also provided in a pre-exam email.

Neuropathology (Block 4) is presented as a part of "Diseases of the Nervous System" and will be tested independently as part of that course. There are no formal exams for the Lab Medicine theme, but there will be required non-graded assessments posted on Canvas.

What is the exam format? Each exam consists of single answer multiple choice questions in a Board-style format. Many questions will be introduced with classic clinical scenarios. *All four exams* include a "practical" portion consisting of questions that require interpretation of images of gross and/or microscopic specimens. Some questions will require integration across objectives. In general, questions are requested from faculty at a rate of approximately 4 written and 2 practical questions per lecture hour. Because there are variable numbers of hours per block, the lengths of the exams are variable. Block 3 was expanded to allow more time for Board prep in Block 6; accordingly the Block 3 exam is the longest exam of the year.

Should I use copies of old exams? In my opinion, the use of any banked old exams for exam preparation is inconsistent with "life-long learning" and I recommend that you avoid using them. Sample questions are posted before the first exam.

How will I be informed of the results? All grades are reported via Canvas. Every effort will be made to expeditiously report the results of exams, usually by the end of exam week. Please do not ask for an "early notification" of your grade.

What should I do if I have concerns about the validity or fairness of a question? Concerns about the wording of specific questions must be entered in the comments sections on the exam. I do my best to make the exam as fair as I can, consider any comments entered for the exam, and attempt to discard ambiguous or poorly written questions prior to grading. Validity of questions is also assessed by examining item statistics prior to uploading of the exam score.

There are sometimes differing ideas or theories regarding disease pathogenesis or nomenclature and differences of opinion regarding optimal approaches to diagnosis and therapy. All questions should, therefore, be answered in a way that is consistent with material presented by the lecturer. The exams are organized in such a way that the source of the question should be obvious. Demonstration of alternative possible answers based on lecture notes from other courses, past exams, or non-assigned reading materials will not be a basis for allowing alternative responses. Likewise, scoring will not be changed on the basis of perceived ambiguities in the wording of objectives; the objectives - like the Course - are constantly evolving and should only be used as a guide.

How can I review my exam? Once all exams have been graded and the results are finalized you will receive an announcement notifying you of the date and time for the exam review. The date will also be posted on home page with linked instructions.

Formative Assessments

Formative assessments are designed to give students feedback on their individual learning - the emphasis is on learning, not on a grade. All formative assessments for B2-B3 of this course relate to organ system pathology, are case-based, include images, and have the same format as for the exams. All are scheduled as **required assignments** in Canvas, but are also linked from session overview pages. You are encouraged to take the quizzes shortly after the session. In any case, assessments can be taken multiple times and correct answers will be displayed, often with an associated comment. We also sponsor a faculty-vetted collection of Anki cards that includes questions relevant to each session. As indicated above, it is expected that students complete assignments by the due date if not immediately following the session.

Accommodations

Exam accommodations can be requested for any exam scheduled at a time that conflicts with the observance of a religious holiday. If you need to request an accommodation, please contact Dr. Moscoso well in advance. If you become ill or have a family emergency and are unable to complete an assignment/assessment on the scheduled date please contact the course director immediately. If you are unable to take a scheduled exam your illness/emergency will need to be documented with Student Health and/or Dr. Moscoso before a makeup exam can be arranged. Additional accommodations can be requested, per the [Policies Related to Student Rights](#).

Accommodations Based on Sexual Assault The University is committed to offering reasonable academic accommodations to students who are victims of sexual assault. Students are eligible for accommodation regardless of whether they seek criminal or disciplinary action. Depending on the specific nature of the allegation, such measures may include but are not limited to: implementation of a no-contact order, course/classroom assignment changes, and other academic support services and accommodations. If you need to request such accommodations, please direct your request to one of following resources: Dr. Karen Winters, MD, Director of Student Health Service; Dr. Gladys Smith, PhD, Sexual Violence Prevention Therapist and Licensed Psychologist; or Kim Webb, Director of the [Relationship and Sexual Violence Prevention Center](#) at the Danforth Campus. These are confidential resources. However, requests for accommodations will be shared with the appropriate University administration and faculty. The University will maintain confidential any accommodations or protective measures provided to an individual student so long as it does not impair the ability to provide such measures.

Attendance Requirements

There are NO attendance requirements for any session.

Mistreatment Policies and Reporting

The Washington University School of Medicine Guidelines for Professional Conduct in Teacher/Learner Relationships and Policy against Medical Student Mistreatment is available [here](#).

The goal of the Washington University Medical Center is to provide patient care, medical education, and biomedical research of the highest quality. Accomplishing this goal depends in part on an atmosphere of mutual respect and collegiality among all who work and study here.

The University takes allegations of student mistreatment by faculty, residents, staff or other students very seriously and strongly encourages its faculty, staff, and students who experience or are witness to such conduct to report it immediately.

Reporting of Sexual Harassment

If a student comes to a faculty member to discuss or disclose an instance of sexual assault, sex discrimination, sexual harassment, dating violence, domestic violence or stalking, or if that faculty member otherwise observes or becomes aware of such an allegation, the faculty member will keep the information as private as they can, but faculty members of Washington University School of Medicine are required to immediately report it to an Office of Education Dean or directly to Ms. Jessica Kennedy, the University's Title IX Director. If you would like to speak directly with Ms. Kennedy, she can be reached at (314) 935-3118, or by visiting the [Title IX office](#) in Umrath Hall on Danforth Campus. Additionally, you can report incidents or complaints to OMSE or by contacting WUSM Protective Services 314-362-4357 or your local law enforcement agency. You can also speak confidentially and learn more about available resources by contacting Dr. Gladys Smith, PhD, a sexual violence prevention therapist and licensed psychologist at the Medical Campus, (314) 362-2404, or contacting the Relationship and Sexual Violence Prevention Center located on the 4th floor of Seigle Hall on Danforth Campus, (314) 935-3445. For additional resources go to [this site](#).

Bias Reporting

The University has a process through which students, faculty, staff and community members who have experienced or witnessed incidents of bias, prejudice or discrimination against a student can report their experiences to the WU [Bias Response and Support System](#) (BRSS) team.

To report mistreatment or offensive behavior in the MD program, please report via the following pathways:

- [Canvas](#) utilizing the direct link from the *Student Commons < Mistreatment, Offensive Behavior, and Bias Reporting*
- Directly contacting the Senior Associate Dean for Education, Associate Dean for Student Affairs, Associate Dean for Medical Student Education, or student Ombudsperson.

Mental Health

[Mental Health Services'](#) professional staff members work with students to resolve personal and interpersonal difficulties, many of which can affect the academic experience. These include conflicts with or worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression.

Resources on the Medical Campus

The training team of the [Office of the Associate Vice Chancellor for Diversity, Equity and Inclusion](#) facilitates and leads diversity education programming for faculty, staff and students on a wide range of topics including: creating a climate of respect, the value of diversity and the role of biases in our day-to-day lives. The [Office of Diversity Programs](#) promotes diversity among and prepares medical students to lead in a global society. A priority for the Office of Diversity Programs is to cultivate and foster a supportive campus climate for students of all backgrounds, cultures and identities. The [Diversity and Inclusion Student Council](#) promotes an inclusive campus environment for all School of Medicine students. The Office for International Students and Scholars embraces the university's mission of welcoming promising students from around the world via the [WU Minority Medical Association](#).

Professionalism Expectations

Online Course Evaluations

Your carefully considered feedback on our online evaluations is critical to guide future improvements to the course, both in terms of the overall structure of the course and the presentation of specific lectures.

There is now a link for rapid feedback associated with each session. Although we have no way to respond to individual comments, the provided feedback is given close attention.

An evaluation sheet is provided at the back of each syllabus to help you recall your impressions and concerns regarding specific lectures before the formal end-of-block online student evaluations. Comments regarding possible areas of redundancy, apparent contradictions, and possible deficiencies in the content or organization of handouts and lectures are particularly welcome. Please make your comments regarding the performance of specific lecturers as constructive as possible. All our faculty want to teach, despite the paucity of tangible rewards.

Professionalism and the Pathology Course

Each Course Director has been asked to define professional behavior in relation to their Course. In my view, professionalism will be reflected by:

- an acceptance of fellow students and faculty as professional colleagues deserving courtesy and respect;
- a focus on learning rather than meeting minimum Course requirements or simply studying for the examinations;
- an acceptance of uncertainty, ambiguity, and the inevitability of change in relation to medical knowledge and practice;
- a respect for alternative views or differing interpretations of scientific or clinical information, and a respect for different teaching styles and practices;
- the ability to assume personal responsibility for fulfilling course requirements;
- a willingness to help the faculty identify errors or deficiencies in course materials, and to provide specific, thoughtful, and constructive feedback relating to lectures and other course content on the formal Course Evaluations.

The professional expectations for this course are in line with those of the Washington University School of Medicine. Please refer to the policies posted in the [Bulletin of the School of Medicine](#).

RECENT COURSE UPDATES BASED ON STUDENT FEEDBACK

- Efforts have focused on modifications required for online learning.

CONCLUDING NOTES

You are now one of us, a medical colleague. It is time to take control of your learning and embrace the process of lifelong education that will make you the best possible physician, physician-scientist and/or teacher.